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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
CHOI, MICHAEL P	

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2621	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/815,708	YOO ET AL.	
	Examiner	Art Unit	
	Michael P. Choi	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 November 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,13,17 and 21-28* is/are pending in the application.

4a) Of the above claim(s) *8-12,14-16 and 18-20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,13,17 and 21-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I (claims 1-7, 13 and 17) in the reply filed on 11/21/07 is acknowledged. Linking claims 21-28 will be examined with the elected combination (see MPEP § 809.03).

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

> Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.
>
> When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and Warmerdam, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).
>
> In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims 1-7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 1-7 define "A recording medium having a data structure for managing" embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "when functional descriptive

material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed recording medium having a data structure for managing can range form paper on which the program is written, to a program simply contemplated and memorized by a person. Any amendment to the claim would be commensurate with its corresponding disclosure.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-7 and 21-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Saeki et al. (US 6,067,400).

Regarding Claim 1, Saeki et al. teaches a recording medium having a data structure for managing to resume reproduction of at least video data recorded on the recording medium, having data recorded thereon (in at least Fig. 4), the data comprising:

- at least one data playing unit including the video data (in at least Fig. 16 – program chain information table with PGC information to video data, Figs. 6, 17); and
- navigation information for managing the data playing unit (Fig. 16 – VOB position information), wherein the navigation information includes control information to indicate whether resumption of the data playing unit is permitted or not (Figs. 6, 7, 11 – management pack of VOBU comprising DSI packet wherein each DSI packet contains return addresses to resume reproduction after manually pressing MENU on remote controller; Col. 12, lines 44-55 as well as PCI packets).

Regarding Claim 2, Saeki et al. teaches the recording medium of claim 1, wherein the data playing unit is a title or a program chain (in at least Fig. 16 – program chain information table with PGC information to video data, Figs. 6, 17).

Regarding Claim 3, Saeki et al. teaches the recording medium of claim 2, wherein the control information is recorded in a program chain information table pertaining to the navigation information (Figs. 6, 7, 11 – management pack of VOBU comprising DSI packet wherein each DSI packet contains return addresses, VOB position information, Fig. 16, to resume reproduction after manually pressing MENU on remote controller; Col. 12, lines 44-55).

Regarding Claim 4, Saeki et al. teaches the recording medium of claim 1, wherein the data playing unit is a data section specified by a movie object constituting a title (in at least Fig. 16 – first layer comprised of video title set with VOB).

Regarding Claim 5, Saeki et al. teaches the recording medium of claim 4, wherein the control information is recorded in the movie object pertaining to the navigation information (Fig. 16 – VOB position information).

Regarding Claim 6, Saeki et al. teaches the recording medium of claim 1, wherein the navigation information further includes commands to conduct operations according to value of the control information (Col. 24, line 60-Col. 25, line 8 – resuming current VOBU for menu display).

Regarding Claim 7, Saeki et al. teaches the recording medium of claim 1, wherein the control information is applied when menu presentation is called during reproduction of the data playing unit (Col. 24, line 60-Col. 25, line 8 – storing return addresses and resuming current VOBU for menu display).

Regarding Claim 21, Saeki et al. teaches a method for reproducing a data structure for managing to resume reproduction of at least video data recorded on a recording medium (in at least Fig. 4), comprising the steps of:

- reproducing a data playing unit including the video data from the recording medium (in at least Figs. 25-27 – reproducing program chain having video data);
- checking a resumable flag included in navigation information for managing the data playing unit if menu presentation is requested (Col. 24, line 60 - Col. 25, line 25); and
- conducting menu presentation operation after storing current reproduction location on the data playing unit, based on value of the resumable flag (Figs. 6, 7, 11 – management pack of VOBU comprising DSI packet wherein each DSI packet contains return addresses to resume reproduction after manually pressing MENU on remote controller; Col. 12, lines 44-55 as well as PCI packets).

Regarding Claim 22, Saeki et al. teaches the method of claim 21, further comprising the step of resuming to reproduce from the stored reproduction location after menu operation commanded from a user (Col. 24, line 60 - Col. 25, line 25).

Regarding Claim 23, Saeki et al. teaches a method for reproducing a data structure for managing to resume reproduction of at least video data recorded on a recording medium in at least Fig. 4), comprising the steps of:

- reproducing a data playing unit including the video data from the recording medium (in at least Figs. 25-27 – reproducing program chain having video data);
- checking a resumable flag included in navigation information for managing the data playing unit if menu presentation is requested (Col. 24, line 60 - Col. 25, line 25); and
- conducting menu presentation operation after storing current reproduction location on the data playing unit, based on value of the resumable flag (Figs. 6, 7, 11 – management pack of VOBU

comprising DSI packet wherein each DSI packet contains return addresses to resume reproduction after manually pressing MENU on remote controller; Col. 12, lines 44-55 as well as PCI packets).

Regarding Claim 24, Saeki et al. teaches the method of claim 23, further comprising the step of resuming to reproduce from the updated location information after menu operation commanded from a user (Col. 24, line 60 - Col. 25, line 25).

Regarding Claim 25, Saeki et al. teaches an apparatus for reproducing a data structure for managing to resume reproduction of at least video data recorded on a recording medium (in at least Fig. 4), comprising:

- a drive for driving an optical reproducing device (Fig. 20, 82 – driver light pickup) to reproduce data recorded on the recording medium (Fig. 25 – reproduction from disc insertion);
- a decoder for presenting the reproduced data (in at least Fig. 20, 85 - AV decoder unit); and
- a controller for controlling the drive to reproduce a data playing unit including the video data from the recording medium (Fig. 20, 93 – system control unit),
    - wherein, if menu presentation is requested, the controller checks a resumable flag included in navigation information for managing the data playing unit (Col. 24, line 60 - Col. 25, line 25), and
    - controls the drive and the decoder to conduct menu presentation operation after storing current reproduction location on the data playing unit, based on value of the resumable flag (Figs. 6, 7, 11 – management pack of VOBU comprising DSI packet wherein each DSI packet contains return addresses to resume reproduction after manually pressing MENU on remote controller; Col. 12, lines 44-55 as well as PCI packets).

Regarding Claim 26, Saeki et al. teaches the apparatus of claim 25, wherein the controller further controls the drive to resume reproduction from the stored reproduction location after menu operation commanded from a user (Col. 24, line 60 - Col. 25, line 25).

Regarding Claim 27, Saeki et al. teaches an apparatus for reproducing a data structure for managing to resume reproduction of at least video data recorded on a recording medium (in at least Fig. 4), comprising:

- a drive for driving an optical reproducing device (Fig. 20, 82 – driver light pickup) to reproduce data recorded on the recording medium (Fig. 25 – reproduction from disc insertion);
- a decoder for presenting the reproduced data (in at least Fig. 20, 85 - AV decoder unit); and
- a controller for controlling the drive to reproduce a data playing unit including the video data from the recording medium (Fig. 20, 93 – system control unit),
    - wherein, if menu presentation is requested, the controller checks a resumable flag included in navigation information for managing the data playing unit (Col. 24, line 60 - Col. 25, line 25), and
    - controls the drive and the decoder to conduct menu presentation operation after storing current reproduction location on the data playing unit, based on value of the resumable flag (Figs. 6, 7, 11 – management pack of VOBU comprising DSI packet wherein each DSI packet contains return addresses to resume reproduction after manually pressing MENU on remote controller; Col. 12, lines 44-55 as well as PCI packets).

Regarding Claim 28, Saeki et al. teaches the apparatus of claim 27, wherein the controller further controls the drive to resume reproduction from the updated location information after menu operation commanded from a user (Col. 24, line 60 - Col. 25, line 25).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 13 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saeki et al. (US 6,067,400) in view of Kashiwagi et al. (US 5,923,869 A).

Regarding Claim 13, Saeki et al. teaches a method for recording a data structure for managing to resume reproduction of at least video data on a recording medium, comprising:

- recording at least one data playing unit including the video data on the recording medium (Col. 20, lines 31-38 – storage of PGC with VOB); and
- recording navigation information for managing the data playing unit on the recording medium (Fig. 16 – VOB position information stored along with DSI and PCI packets, Col. 12, lines 44-55), wherein the navigation information includes control information to indicate whether resumption of the data playing unit is permitted or not (Figs. 6, 7, 11 – management pack of VOBU comprising DSI packet wherein each DSI packet contains return addresses to resume reproduction after manually pressing MENU on remote controller; Col. 12, lines 44-55 as well as PCI packets).

Saeki et al. fails to explicitly teach recording on the recording medium. Kashiwagi et al. teaches recording on a recording medium (Fig. 2, 1200 – recording onto disc, M).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have video information including the video data to be recorded onto a medium so as to make data portable to be reproduced at various locations.

Regarding Claim 17, Saeki et al. teaches an apparatus for recording a data structure for managing to resume reproduction of at least video data on a recording medium, comprising:

- a drive for driving an optical recording means (Fig. 20, 82 – driver light pickup) that records data on the recording medium;
- a controller for controlling the drive to record the encoded video data as at least one data playing unit (Fig. 20, 83 – mechanism control unit that drives light pickup) on the recording medium, and
    - for creating navigation information for managing the data playing unit (Fig. 16 – VOB position information stored along with DSI and PCI packets, Col. 12, lines 44-55) and controlling the drive to record the created navigation information on the recording medium (Fig. 20, 93 - system control unit), wherein the navigation information includes control information to indicate whether resumption of the data playing unit is permitted or not (Figs. 6, 7, 11 – management pack of VOBU comprising DSI packet wherein each DSI packet contains return addresses to resume reproduction after manually pressing MENU on remote controller; Col. 12, lines 44-55 as well as PCI packets).

Saeki et al. fails to explicitly teach recording on a recording medium and an encoder. Kashiwagi et al. teaches recording on a recording medium (Fig. 2, 1200 – recording onto disc, M) and an encoder for encoding data (in at least Fig. 2, 200, 300, 500, 700).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have video information including the video data to be recorded as well as management information and data to be encoded onto a medium so as to make data portable to be reproduced at various locations.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael P. Choi whose telephone number is (571) 272-9594. The examiner can normally be reached on Monday - Friday 8:00AM - 5:30PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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